



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 6
HOUSTON BRANCH
10625 FALLSTONE RD.
HOUSTON, TEXAS 77099

January 21, 2016

MEMORANDUM

SUBJECT: Contract Laboratory Program Data Review

FROM: *Raymond Flores*
Raymond Flores, Alternate ESAT Regional Project Officer
Environmental Services Branch (6MD-HL)

TO: Katrina Coltrain, Remedial Project Manager (6SF-RL)

Site: WILCOX OIL

Case#: 45671

SDG#: MF6R32

The EPA Region 6 Environmental Services Branch ESAT data review team has completed a review of the submitted Contract Laboratory Program (CLP) data package for the referenced site. The samples analyzed and reviewed are detailed in the attached Regional data review report.

The data package is acceptable for regional use. Problems, if any, are listed in the report narrative. If you have any questions regarding the data review report, please contact me at (281) 983-2139.

ENVIRONMENTAL SERVICES ASSISTANCE TEAM

ESAT Region 6
10625 Fallstone Road
Houston, TX 77099

Alion Science and Technology

MEMORANDUM

DATE: January 20, 2016

TO: Marvely Humphrey, ESAT PO, Region 6 EPA

FROM: Sonya Meekins, *JM*, Data Reviewer, ESAT

THRU: Dominic G. Jarecki, ESAT Program Manager, ESAT *DGJ*

SUBJECT: CLP Data Review

Contract No.: EP-W-13-026
TO No.: 002
Task/Sub-Task: 2-12
ESAT Doc. No.: 1602-212-0012
TDF No.: 6-16-122A
ESAT File No.: I-0681

Attached is the data review summary for Case # 45671

SDG # MF6R32

Site Wilcox Oil

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
 REGION 6
 HOUSTON BRANCH
 10625 FALLSTONE ROAD
 HOUSTON, TEXAS 77099

INORGANIC REGIONAL DATA ASSESSMENT

CASE NO.	45671	SITE	Wilcox Oil
LABORATORY	BON	NO. OF SAMPLES	6
CONTRACT#	EP-W-14-029	MATRIX	Water
SDG#	MF6R32	REVIEWER (IF NOT ESB)	ESAT
SOW#	ISM02.3/MA 2542.1	REVIEWER'S NAME	Sonya Meekins
SF#	303DD2GG	COMPLETION DATE	January 20, 2016

SAMPLE NO.	MF6R32	MF6R46			
	MF6R42	MF6R47			
	MF6R44				
	MF6R45				

ICP-MS HG

1. HOLDING TIMES	O	O
2. CALIBRATIONS	O	O
3. BLANKS	O	O
4. MATRIX SPIKES	O	O
5. DUPLICATE ANALYSIS	O	O
6. ICP QC	M	N/A
7. LCS	O	N/A
8. SAMPLE VERIFICATION	O	O
9. OTHER QC	N/A	N/A
10. OVERALL ASSESSMENT	M	O

O = Data had no problems.

M = Data qualified due to major or minor problems.

Z = Data unacceptable.

NA = Not applicable.

ACTION ITEMS:

AREAS OF CONCERN: The sodium serial dilution difference was above the QC limit. One sample had poor IS performance.

**COMMENTS/CLARIFICATIONS
REGION 6 CLP QA REVIEW**

CASE 45671 SDG MF6R32 SITE Wilcox Oil LAB BON

COMMENTS: This SDG consisted of six dissolved water samples for total metals by ICP-MS and mercury analyses following SOW ISM02.3. The samples were also subject to Modified Analysis Request 2542.1 (MA 2542.1), which requested lower CRQLs for eight analytes. The sampler designated sample MF6R42 for QC analyses.

The target analytes of concern with the desired CRQLs in parentheses are antimony (1.0 ug/L), arsenic (0.50 ug/L), cadmium (0.50 ug/L), chromium (1.0 ug/L), cobalt (0.50 ug/L), magnesium (250 ug/L), selenium (2.5 ug/L), and thallium (0.50 ug/L). The analytes of concern detected above the CRQLs are antimony, arsenic, chromium, cobalt, magnesium, and/or selenium in all samples. The laboratory reanalyzed sample MF6R32 at the required 2X dilution because the %RI for ISs Y-89 and Bi-209 were above the QC limit in the undiluted analyses of these samples. The dilution repeated this problem for IS Y-89, so the laboratory reported the associated undiluted results. The dilution had an acceptable %RI for IS Bi-209, so the laboratory reported the results associated with IS Bi-209 from the diluted analysis. The laboratory also diluted (up to 100X) and reanalyzed samples MF6R32 and MF6R44 because of high lead, sodium, and/or vanadium concentrations. Because of sample matrix, the laboratory reduced the digestion volume for sample MF6R32 by half. Therefore, the CRQLs for cadmium and thallium did not meet the CRQLs in the MA 2542.1 for these two analytes.

S3VEM Review was performed for this data package as requested by the TDF. For this review option, laboratory contractual compliance and technical usability of the sample results are primarily determined by the EDM CCS Defect Report and NFG Data Review Results Report, respectively. The reviewer performs supplemental hardcopy forms checking and applies Region 6 guidelines, where necessary, to account for known limitations of the electronic review process. Therefore, the reviewer's final assessments may deviate from those found in the EDM reports. The NFG Data Review Results Report for the SDG is attached to this report as an addendum for additional information.

OVERALL ASSESSMENT: Some results were qualified for all samples because of problems with a serial dilution difference and/or poor IS performance. ESAT's final data qualifiers in the DST indicate the technical usability of all reported sample results. An Evidence Audit was conducted for the CSF, and the audit results were reported on the Evidence Inventory Checklist. The DST included in this report is the final version.

INORGANIC ACRONYMS

CCB	Continuing Calibration Blank
CCS	Contract Compliance Screening
CCV	Continuing Calibration Verification
CN	Cyanide
CRQL	Contract Required Quantitation Limit
CSF	Complete SDG File
DST	Data Summary Table
EDM	EXES Data Manager
HG	Mercury
ICB	Initial Calibration Blank
ICP	Inductively Coupled Plasma
ICP-AES	Inductively Coupled Plasma-Atomic Emission Spectroscopy
ICP-MS	Inductively Coupled Plasma-Mass Spectrometry
ICS	Interference Check Sample
ICV	Initial Calibration Verification
IS	Internal Standard
LCS	Laboratory Control Sample
MDL	Method Detection Limit
NFG	National Functional Guidelines
PE	Performance Evaluation
%D	Percent Difference
%R	Percent Recovery
%RI	Percent Relative Intensity
%RSD	Percent Relative Standard Deviation
QA	Quality Assurance
QC	Quality Control
QL	Quantitation Limit
RPD	Relative Percent Difference
RSCC	Regional Sample Control Center
S3VEM	Stage 3 Validation Electronic and Manual (previously called Modified CADRE Review)
S4VEM	Stage 4 Validation Electronic and Manual (previously called Standard Review)
SDG	Sample Delivery Group
SMO	Sample Management Office
SOW	Statement of Work
SQL	Sample Quantitation Limit
TAL	Target Analyte List

HEADER DEFINITIONS FOR INORGANIC EXCEL DST

CASE: Case Number
SDG: SDG Number
EPASAMP: EPA Sample Number
LABID: Laboratory File/Sample ID
MATRIX: Sample Matrix
QCCOD: Sample QC Code
SMPQUAL: Sample Qualifier
ANDATE: Sample Analysis Date
ANTIME: Sample Analysis Time
CASNUM: Compound CAS Number
ANALYTE: Compound Name
CONC: Compound Concentration
VALDQAL: Region 6 Inorganic Data Validation Qualifier (see
Inorganic Data Qualifier Definitions on the next page)
UNITS: Concentration Units
ADJCRQL: Adjusted Contract Required Quantitation Limit Value
SMPDATE: Sampling Date
PRPDATE: Sample Preparation Date
LRDATE: Laboratory Receipt Date
LEVEL: Sample Level
PERSOLD: Sample Percent Solids
SMPWTVL: Sample Weight (Soil Samples)/Initial Sample Volume (Water
Samples)
FINLVOL: Final Sample Volume
METHOD: Method of Analysis
STATLOC: Station Location

Disclaimer: ESAT verified the accuracy of the information reported in the Excel DST only for the following data fields: CASE, SDG, EPASAMP, MATRIX, ANALYTE, CONC, UNITS, ADJCRQL, VALDQAL, and PERSOLD. The data qualifiers in the VALDQAL column indicate the technical usability of the reported results.

INORGANIC DATA QUALIFIER DEFINITIONS

The following definitions provide brief explanations of the ESAT-Region 6 qualifiers assigned to results in the Data Summary Table.

- U Not detected at reported quantitation limit.
- L Reported concentration is between the MDL and the CRQL.
- J Result is estimated because of outlying quality control parameters such as matrix spike, serial dilution, etc., or the result is below the CRQL.
- R Result is unusable.
- F A possibility of a false negative exists.
- UC Reported concentration should be used as a raised quantitation limit because of blank effects and/or laboratory or field contamination.
- + High biased. Actual concentration may be lower than the concentration reported.
- Low biased. Actual concentration may be higher than the concentration reported.
- W The result should be used with caution. The result was reported on a dry weight basis although the sample did not conform to the EPA Office of Water definition of a soil sample because of its high water content (>70% moisture).

CASE	SDG	EPASAMP	LABID	MATRIX	QC CODE	ANDATE	ANTIME	CASNUM	ANALYTE	CONC	VALDQAL	UNITS	ADJCRLQ	SMPDATE	PRPDATE	LRDATE	LEVEL	PERSOLD	SMPWTVL	FINVOL	METHOD	STATLOC
45671	MF6R32	MF6R32	5120223-01	W	Field_Sample	12/30/2015	19:19:23	7429-90-5	Aluminum	1270	ug/L	40.0	12/14/2015	12/22/2015	12/16/2015		25	50	MS	AA-GW-03		
45671	MF6R32	MF6R32	5120223-01	W	Field_Sample	12/30/2015	19:19:23	7440-36-0	Antimony	13.3	ug/L	2.0	12/14/2015	12/22/2015	12/16/2015		25	50	MS	AA-GW-03		
45671	MF6R32	MF6R32	5120223-01	W	Field_Sample	12/30/2015	19:19:23	7440-38-2	Arsenic	707	ug/L	1.0	12/14/2015	12/22/2015	12/16/2015		25	50	MS	AA-GW-03		
45671	MF6R32	MF6R32	5120223-01	W	Field_Sample	12/30/2015	19:19:23	7440-39-3	Barium	752	ug/L	20.0	12/14/2015	12/22/2015	12/16/2015		25	50	MS	AA-GW-03		
45671	MF6R32	MF6R32	5120223-01	W	Field_Sample	12/30/2015	19:19:23	7440-41-7	Beryllium	13.9	ug/L	2.0	12/14/2015	12/22/2015	12/16/2015		25	50	MS	AA-GW-03		
45671	MF6R32	MF6R32	5120223-01	W	Field_Sample	12/30/2015	19:19:23	7440-43-9	Cadmium	1.0	UJ	ug/L	1.0	12/14/2015	12/22/2015	12/16/2015		25	50	MS	AA-GW-03	
45671	MF6R32	MF6R32	5120223-01	W	Field_Sample	12/30/2015	19:19:23	7440-70-2	Calcium	69300	ug/L	1000	12/14/2015	12/22/2015	12/16/2015		25	50	MS	AA-GW-03		
45671	MF6R32	MF6R32	5120223-01	W	Field_Sample	01/04/2016	13:54:03	7440-47-3	Chromium	752	ug/L	2.0	12/14/2015	12/22/2015	12/16/2015		25	50	MS	AA-GW-03		
45671	MF6R32	MF6R32	5120223-01	W	Field_Sample	12/30/2015	19:19:23	7440-48-4	Cobalt	69.8	J	ug/L	1.0	12/14/2015	12/22/2015	12/16/2015		25	50	MS	AA-GW-03	
45671	MF6R32	MF6R32	5120223-01	W	Field_Sample	12/30/2015	19:19:23	7440-50-8	Copper	39.0	J	ug/L	4.0	12/14/2015	12/22/2015	12/16/2015		25	50	MS	AA-GW-03	
45671	MF6R32	MF6R32	5120223-01	W	Field_Sample	12/30/2015	19:19:23	7439-89-6	Iron	16700	J	ug/L	400	12/14/2015	12/22/2015	12/16/2015		25	50	MS	AA-GW-03	
45671	MF6R32	MF6R32	5120223-01	W	Field_Sample	01/04/2016	14:28:33	7439-92-1	Lead	752	J	ug/L	4.0	12/14/2015	12/22/2015	12/16/2015		25	50	MS	AA-GW-03	
45671	MF6R32	MF6R32	5120223-01	W	Field_Sample	12/30/2015	19:19:23	7439-95-4	Magnesium	79000	ug/L	500	12/14/2015	12/22/2015	12/16/2015		25	50	MS	AA-GW-03		
45671	MF6R32	MF6R32	5120223-01	W	Field_Sample	12/30/2015	19:19:23	7439-96-5	Manganese	1370	ug/L	2.0	12/14/2015	12/22/2015	12/16/2015		25	50	MS	AA-GW-03		
45671	MF6R32	MF6R32	5120223-01	W	Field_Sample	12/30/2015	19:19:23	7440-02-0	Nickel	919	J	ug/L	2.0	12/14/2015	12/22/2015	12/16/2015		25	50	MS	AA-GW-03	
45671	MF6R32	MF6R32	5120223-01	W	Field_Sample	12/30/2015	19:19:23	7440-09-7	Potassium	1550	ug/L	1000	12/14/2015	12/22/2015	12/16/2015		25	50	MS	AA-GW-03		
45671	MF6R32	MF6R32	5120223-01	W	Field_Sample	12/30/2015	19:19:23	7782-49-2	Selenium	58.5	ug/L	5.0	12/14/2015	12/22/2015	12/16/2015		25	50	MS	AA-GW-03		
45671	MF6R32	MF6R32	5120223-01	W	Field_Sample	12/30/2015	19:19:23	7440-22-4	Silver	2.0	UJ	ug/L	2.0	12/14/2015	12/22/2015	12/16/2015		25	50	MS	AA-GW-03	
45671	MF6R32	MF6R32	5120223-01	W	Field_Sample	12/29/2015	13:57:40	7440-23-5	Sodium	6490000	J	ug/L	100000	12/14/2015	12/22/2015	12/16/2015		25	50	MS	AA-GW-03	
45671	MF6R32	MF6R32	5120223-01	W	Field_Sample	01/04/2016	14:28:33	7440-28-0	Thallium	2.0	UJ	ug/L	2.0	12/14/2015	12/22/2015	12/16/2015		25	50	MS	AA-GW-03	
45671	MF6R32	MF6R32	5120223-01	W	Field_Sample	12/30/2015	19:23:28	7440-62-2	Vanadium	4170	ug/L	30.0	12/14/2015	12/22/2015	12/16/2015		25	50	MS	AA-GW-03		
45671	MF6R32	MF6R32	5120223-01	W	Field_Sample	12/30/2015	19:23:28	7440-66-6	Zinc	35.9	J	ug/L	4.0	12/14/2015	12/22/2015	12/16/2015		25	50	MS	AA-GW-03	
45671	MF6R42	MF6R42	5120223-02	W	Field_Sample	12/30/2015	19:23:28	7429-90-5	Aluminum	29.6	ug/L	20.0	12/14/2015	12/22/2015	12/16/2015		50	50	MS	TF-34-DISCH		
45671	MF6R42	MF6R42	5120223-02	W	Field_Sample	12/30/2015	19:23:28	7440-36-0	Antimony	1.0	U	ug/L	1.0	12/14/2015	12/22/2015	12/16/2015		50	50	MS	TF-34-DISCH	
45671	MF6R42	MF6R42	5120223-02	W	Field_Sample	12/30/2015	19:23:28	7440-38-2	Arsenic	1.1	ug/L	0.50	12/14/2015	12/22/2015	12/16/2015		50	50	MS	TF-34-DISCH		
45671	MF6R42	MF6R42	5120223-02	W	Field_Sample	12/30/2015	19:23:28	7440-39-3	Barium	37.9	ug/L	10.0	12/14/2015	12/22/2015	12/16/2015		50	50	MS	TF-34-DISCH		
45671	MF6R42	MF6R42	5120223-02	W	Field_Sample	12/30/2015	19:23:28	7440-41-7	Beryllium	1.0	U	ug/L	1.0	12/14/2015	12/22/2015	12/16/2015		50	50	MS	TF-34-DISCH	
45671	MF6R42	MF6R42	5120223-02	W	Field_Sample	12/30/2015	19:23:28	7440-43-9	Cadmium	0.50	U	ug/L	0.50	12/14/2015	12/22/2015	12/16/2015		50	50	MS	TF-34-DISCH	
45671	MF6R42	MF6R42	5120223-02	W	Field_Sample	12/30/2015	19:23:28	7440-70-2	Calcium	17400	ug/L	500	12/14/2015	12/22/2015	12/16/2015		50	50	MS	TF-34-DISCH		
45671	MF6R42	MF6R42	5120223-02	W	Field_Sample	01/04/2016	13:57:53	7440-47-3	Chromium	0.49	LJ	ug/L	1.0	12/14/2015	12/22/2015	12/16/2015		50	50	MS	TF-34-DISCH	
45671	MF6R42	MF6R42	5120223-02	W	Field_Sample	12/30/2015	19:23:28	7440-48-4	Cobalt	3.6	ug/L	0.50	12/14/2015	12/22/2015	12/16/2015		50	50	MS	TF-34-DISCH		
45671	MF6R42	MF6R42	5120223-02	W	Field_Sample	12/30/2015	19:23:28	7440-50-8	Copper	2.9	ug/L	2.0	12/14/2015	12/22/2015	12/16/2015		50	50	MS	TF-34-DISCH		
45671	MF6R42	MF6R42	5120223-02	W	Field_Sample	12/30/2015	19:23:28	7439-89-6	Iron	1400	ug/L	200	12/14/2015	12/22/2015	12/16/2015		50	50	MS	TF-34-DISCH		
45671	MF6R42	MF6R42	5120223-02	W	Field_Sample	12/30/2015	19:23:28	7439-92-1	Lead	106	ug/L	1.0	12/14/2015	12/22/2015	12/16/2015		50	50	MS	TF-34-DISCH		
45671	MF6R42	MF6R42	5120223-02	W	Field_Sample	12/30/2015	19:23:28	7439-95-4	Magnesium	7240	ug/L	250	12/14/2015	12/22/2015	12/16/2015		50	50	MS	TF-34-DISCH		
45671	MF6R42	MF6R42	5120223-02	W	Field_Sample	12/30/2015	19:23:28	7439-96-5	Manganese	894	ug/L	1.0	12/14/2015	12/22/2015	12/16/2015		50	50	MS	TF-34-DISCH		
45671	MF6R42	MF6R42	5120223-02	W	Field_Sample	12/30/2015	19:23:28	7440-02-0	Nickel	4.1	ug/L	1.0	12/14/2015	12/22/2015	12/16/2015		50	50	MS	TF-34-DISCH		
45671	MF6R42	MF6R42	5120223-02	W	Field_Sample	12/30/2015	19:23:28	7440-09-7	Potassium	3050	ug/L	500	12/14/2015	12/22/2015	12/16/2015		50	50	MS	TF-34-DISCH		
45671	MF6R42	MF6R42	5120223-02	W	Field_Sample	12/30/2015	19:23:28	7782-49-2	Selenium	2.5	U	ug/L	2.5	12/14/2015	12/22/2015	12/16/2015		50	50	MS	TF-34-DISCH	
45671	MF6R42	MF6R42	5120223-02	W	Field_Sample	12/30/2015	19:23:28	7440-22-4	Silver	1.0	U	ug/L	1.0	12/14/2015	12/22/2015	12/16/2015		50	50	MS	TF-34-DISCH	
45671	MF6R42	MF6R42	5120223-02	W	Field_Sample	12/29/2015	14:00:09	7440-23-5	Sodium	8410	J	ug/L	500	12/14/2015	12/22/2015	12/16/2015		50	50	MS	TF-34-DISCH	
45671	MF6R42	MF6R42	5120223-02	W	Field_Sample	12/30/2015	19:23:28	7440-28-0	Thallium	0.50	UJ	ug/L	0.50	12/14/2015	12/22/2015	12/16/2015		50	50	MS	TF-34-DISCH	
45671	MF6R42	MF6R42	5120223-02	W	Field_Sample	12/30/2015	19:23:28	7440-62-2	Vanadium	0.38	LJ	ug/L	5.0	12/14/2015	12/22/2015	12/16/2015		50	50	MS	TF-34-DISCH	
45671	MF6R42	MF6R42	5120223-02	W	Field_Sample	12/30/2015	19:23:28	7440-66-6	Zinc	14.6	ug/L	2.0	12/14/2015	12/22/2015	12/16/2015		50	50	MS	TF-34-DISCH		
45671	MF6R44	MF6R44	5120223-03	W	Field_Sample	12/30/2015	19:39:51	7429-90-5	Aluminum	4430	ug/L	20.0	12/14/2015	12/22/2015	12/16/2015		50	50	MS	TF-34-01		
45671	MF6R44	MF6R44	5120223-03	W	Field_Sample	12/30/2015	19:39:51	7440-36-0	Antimony	1.3	ug/L	1.0	12/14/2015	12/22/2015	12/16/2015		50	50	MS	TF-34-01		
45671	MF6R44	MF6R44	5120223-03	W	Field_Sample	12/30/2015	19:39:51	7440-38-2	Arsenic	8.3	ug/L	0.50	12/14/2015	12/22/2015	12/16/2015		50	50	MS	TF-34-01		
45671	MF6R44	MF6R44	5120223-03	W	Field_Sample	12/30/2015	19:39:51	7440-39-3	Barium	117	ug/L	10.0	12/14/2015	12/22/2015	12/16/2015		50	50	MS	TF-34-01		
45671	MF6R44	MF6R44	5120223-03	W	Field_Sample	12/30/2015	19:39:51	7440-41-7	Beryllium	0.31	LJ	ug/L	1.0	12/14/2015	12/22/2015	12/16/2015		50	50	MS	TF-34-01	
45671	MF6R44	MF6R44	5120223-03	W	Field_Sample	12/30/2015	19:39:51	7440-43-9	Cadmium</													

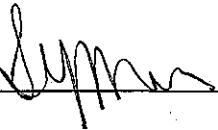
45671	MF6R32	MF6R45	5120223-04	W	Field_Sample	12/30/2015	19:43:57	7440-70-2	Calcium	37500	U	ug/L	500	12/14/2015	12/22/2015	12/16/2015	50	50	MS	LOR-18
45671	MF6R32	MF6R45	5120223-04	W	Field_Sample	01/04/2016	14:17:02	7440-47-3	Chromium	0.33	LJ	ug/L	1.0	12/14/2015	12/22/2015	12/16/2015	50	50	MS	LOR-18
45671	MF6R32	MF6R45	5120223-04	W	Field_Sample	12/30/2015	19:43:57	7440-48-4	Cobalt	1.4	ug/L	0.50	12/14/2015	12/22/2015	12/16/2015	50	50	MS	LOR-18	
45671	MF6R32	MF6R45	5120223-04	W	Field_Sample	12/30/2015	19:43:57	7440-50-8	Copper	2.0	U	ug/L	2.0	12/14/2015	12/22/2015	12/16/2015	50	50	MS	LOR-18
45671	MF6R32	MF6R45	5120223-04	W	Field_Sample	12/30/2015	19:43:57	7439-89-6	Iron	36800	ug/L	200	12/14/2015	12/22/2015	12/16/2015	50	50	MS	LOR-18	
45671	MF6R32	MF6R45	5120223-04	W	Field_Sample	12/30/2015	19:43:57	7439-92-1	Lead	1.0	U	ug/L	1.0	12/14/2015	12/22/2015	12/16/2015	50	50	MS	LOR-18
45671	MF6R32	MF6R45	5120223-04	W	Field_Sample	12/30/2015	19:43:57	7439-95-4	Magnesium	6380	ug/L	250	12/14/2015	12/22/2015	12/16/2015	50	50	MS	LOR-18	
45671	MF6R32	MF6R45	5120223-04	W	Field_Sample	12/30/2015	19:43:57	7439-96-5	Manganese	1660	ug/L	1.0	12/14/2015	12/22/2015	12/16/2015	50	50	MS	LOR-18	
45671	MF6R32	MF6R45	5120223-04	W	Field_Sample	12/30/2015	19:43:57	7440-02-0	Nickel	1.0	U	ug/L	1.0	12/14/2015	12/22/2015	12/16/2015	50	50	MS	LOR-18
45671	MF6R32	MF6R45	5120223-04	W	Field_Sample	12/30/2015	19:43:57	7440-09-7	Potassium	1010	ug/L	500	12/14/2015	12/22/2015	12/16/2015	50	50	MS	LOR-18	
45671	MF6R32	MF6R45	5120223-04	W	Field_Sample	12/30/2015	19:43:57	7782-49-2	Selenium	2.5	U	ug/L	2.5	12/14/2015	12/22/2015	12/16/2015	50	50	MS	LOR-18
45671	MF6R32	MF6R45	5120223-04	W	Field_Sample	12/30/2015	19:43:57	7440-22-4	Silver	1.0	U	ug/L	1.0	12/14/2015	12/22/2015	12/16/2015	50	50	MS	LOR-18
45671	MF6R32	MF6R45	5120223-04	W	Field_Sample	12/29/2015	14:09:57	7440-23-5	Sodium	3210	J	ug/L	500	12/14/2015	12/22/2015	12/16/2015	50	50	MS	LOR-18
45671	MF6R32	MF6R45	5120223-04	W	Field_Sample	12/30/2015	19:43:57	7440-26-0	Thallium	0.50	U	ug/L	0.50	12/14/2015	12/22/2015	12/16/2015	50	50	MS	LOR-18
45671	MF6R32	MF6R45	5120223-04	W	Field_Sample	12/30/2015	19:43:57	7440-62-2	Vanadium	5.0	U	ug/L	5.0	12/14/2015	12/22/2015	12/16/2015	50	50	MS	LOR-18
45671	MF6R32	MF6R45	5120223-04	W	Field_Sample	12/30/2015	19:43:57	7440-66-6	Zinc	2.0	U	ug/L	2.0	12/14/2015	12/22/2015	12/16/2015	50	50	MS	LOR-18
45671	MF6R32	MF6R45	5120223-05	W	Field_Sample	12/30/2015	19:48:03	7429-90-5	Aluminum	215	ug/L	20.0	12/14/2015	12/22/2015	12/16/2015	50	50	MS	POND DISCH	
45671	MF6R32	MF6R46	5120223-05	W	Field_Sample	12/30/2015	19:48:03	7440-36-0	Antimony	1.0	U	ug/L	1.0	12/14/2015	12/22/2015	12/16/2015	50	50	MS	POND DISCH
45671	MF6R32	MF6R46	5120223-05	W	Field_Sample	12/30/2015	19:48:03	7440-38-2	Arsenic	0.78	ug/L	0.50	12/14/2015	12/22/2015	12/16/2015	50	50	MS	POND DISCH	
45671	MF6R32	MF6R46	5120223-05	W	Field_Sample	12/30/2015	19:48:03	7440-39-3	Barium	54.8	ug/L	10.0	12/14/2015	12/22/2015	12/16/2015	50	50	MS	POND DISCH	
45671	MF6R32	MF6R46	5120223-05	W	Field_Sample	12/30/2015	19:48:03	7440-41-7	Beryllium	1.0	U	ug/L	1.0	12/14/2015	12/22/2015	12/16/2015	50	50	MS	POND DISCH
45671	MF6R32	MF6R46	5120223-05	W	Field_Sample	12/30/2015	19:48:03	7440-43-9	Cadmium	0.50	U	ug/L	0.50	12/14/2015	12/22/2015	12/16/2015	50	50	MS	POND DISCH
45671	MF6R32	MF6R46	5120223-05	W	Field_Sample	12/30/2015	19:48:03	7440-70-2	Calcium	26000	ug/L	500	12/14/2015	12/22/2015	12/16/2015	50	50	MS	POND DISCH	
45671	MF6R32	MF6R46	5120223-05	W	Field_Sample	01/04/2016	14:20:52	7440-47-3	Chromium	0.77	LJ	ug/L	1.0	12/14/2015	12/22/2015	12/16/2015	50	50	MS	POND DISCH
45671	MF6R32	MF6R46	5120223-05	W	Field_Sample	12/30/2015	19:48:03	7440-48-4	Cobalt	0.34	LJ	ug/L	0.50	12/14/2015	12/22/2015	12/16/2015	50	50	MS	POND DISCH
45671	MF6R32	MF6R46	5120223-05	W	Field_Sample	12/30/2015	19:48:03	7440-50-8	Copper	3.9	ug/L	2.0	12/14/2015	12/22/2015	12/16/2015	50	50	MS	POND DISCH	
45671	MF6R32	MF6R46	5120223-05	W	Field_Sample	12/30/2015	19:48:03	7439-89-6	Iron	304	ug/L	200	12/14/2015	12/22/2015	12/16/2015	50	50	MS	POND DISCH	
45671	MF6R32	MF6R46	5120223-05	W	Field_Sample	12/30/2015	19:48:03	7439-92-1	Lead	11.1	ug/L	1.0	12/14/2015	12/22/2015	12/16/2015	50	50	MS	POND DISCH	
45671	MF6R32	MF6R46	5120223-05	W	Field_Sample	12/30/2015	19:48:03	7439-95-4	Magnesium	7300	ug/L	250	12/14/2015	12/22/2015	12/16/2015	50	50	MS	POND DISCH	
45671	MF6R32	MF6R46	5120223-05	W	Field_Sample	12/30/2015	19:48:03	7439-96-5	Manganese	36.0	ug/L	1.0	12/14/2015	12/22/2015	12/16/2015	50	50	MS	POND DISCH	
45671	MF6R32	MF6R46	5120223-05	W	Field_Sample	12/30/2015	19:48:03	7440-02-0	Nickel	2.8	ug/L	1.0	12/14/2015	12/22/2015	12/16/2015	50	50	MS	POND DISCH	
45671	MF6R32	MF6R46	5120223-05	W	Field_Sample	12/30/2015	19:48:03	7440-09-7	Potassium	4080	ug/L	500	12/14/2015	12/22/2015	12/16/2015	50	50	MS	POND DISCH	
45671	MF6R32	MF6R46	5120223-05	W	Field_Sample	12/30/2015	19:48:03	7782-49-2	Selenium	2.5	U	ug/L	2.5	12/14/2015	12/22/2015	12/16/2015	50	50	MS	POND DISCH
45671	MF6R32	MF6R46	5120223-05	W	Field_Sample	12/30/2015	19:48:03	7440-22-4	Silver	1.0	U	ug/L	1.0	12/14/2015	12/22/2015	12/16/2015	50	50	MS	POND DISCH
45671	MF6R32	MF6R46	5120223-05	W	Field_Sample	12/29/2015	14:12:07	7440-23-5	Sodium	8780	J	ug/L	500	12/14/2015	12/22/2015	12/16/2015	50	50	MS	POND DISCH
45671	MF6R32	MF6R46	5120223-05	W	Field_Sample	12/30/2015	19:48:03	7440-28-0	Thallium	0.50	U	ug/L	0.50	12/14/2015	12/22/2015	12/16/2015	50	50	MS	POND DISCH
45671	MF6R32	MF6R46	5120223-05	W	Field_Sample	12/30/2015	19:48:03	7440-62-2	Vanadium	0.35	IJ	ug/L	5.0	12/14/2015	12/22/2015	12/16/2015	50	50	MS	POND DISCH
45671	MF6R32	MF6R46	5120223-05	W	Field_Sample	12/30/2015	19:48:03	7440-65-6	Zinc	9.2	ug/L	2.0	12/14/2015	12/22/2015	12/16/2015	50	50	MS	POND DISCH	
45671	MF6R32	MF6R47	5120223-06	W	Field_Sample	12/30/2015	19:52:09	7429-90-5	Aluminum	366	ug/L	20.0	12/14/2015	12/22/2015	12/16/2015	50	50	MS	FD-04	
45671	MF6R32	MF6R47	5120223-06	W	Field_Sample	12/30/2015	19:52:09	7440-36-0	Antimony	1.0	U	ug/L	1.0	12/14/2015	12/22/2015	12/16/2015	50	50	MS	FD-04
45671	MF6R32	MF6R47	5120223-06	W	Field_Sample	12/30/2015	19:52:09	7440-38-2	Arsenic	0.58	ug/L	0.50	12/14/2015	12/22/2015	12/16/2015	50	50	MS	FD-04	
45671	MF6R32	MF6R47	5120223-06	W	Field_Sample	12/30/2015	19:52:09	7440-39-3	Barium	54.0	ug/L	10.0	12/14/2015	12/22/2015	12/16/2015	50	50	MS	FD-04	
45671	MF6R32	MF6R47	5120223-06	W	Field_Sample	12/30/2015	19:52:09	7440-41-7	Beryllium	1.0	U	ug/L	1.0	12/14/2015	12/22/2015	12/16/2015	50	50	MS	FD-04
45671	MF6R32	MF6R47	5120223-06	W	Field_Sample	12/30/2015	19:52:09	7440-43-9	Cadmium	0.50	U	ug/L	0.50	12/14/2015	12/22/2015	12/16/2015	50	50	MS	FD-04
45671	MF6R32	MF6R47	5120223-06	W	Field_Sample	01/04/2016	14:24:43	7440-47-3	Chromium	0.91	LJ	ug/L	1.0	12/14/2015	12/22/2015	12/16/2015	50	50	MS	FD-04
45671	MF6R32	MF6R47	5120223-06	W	Field_Sample	12/30/2015	19:52:09	7440-48-4	Cobalt	0.60	ug/L	0.50	12/14/2015	12/22/2015	12/16/2015	50	50	MS	FD-04	
45671	MF6R32	MF6R47	5120223-06	W	Field_Sample	12/30/2015	19:52:09	7440-50-8	Copper	3.7	ug/L	2.0	12/14/2015	12/22/2015	12/16/2015	50	50	MS	FD-04	
45671	MF6R32	MF6R47	5120223-06	W	Field_Sample	12/30/2015	19:52:09	7439-89-6	Iron	460	ug/L	200	12/14/2015	12/22/2015	12/16/2015	50	50	MS	FD-04	
45671	MF6R32	MF6R47	5120223-06	W	Field_Sample	12/30/2015	19:52:09	7439-92-1	Lead	14.9	ug/L	1.0	12/14/2015	12/22/2015	12/16/2015	50	50	MS	FD-04	
45671	MF6R32	MF6R47	5120223-06	W	Field_Sample	12/30/2015	19:52:09	7439-95-4	Magnesium	7130	ug/L	250	12/14/2015	12/22/2015	12/16/2015	50	50	MS	FD-04	
45671	MF6R32	MF6R47	5120223-06	W	Field_Sample	12/30/2015	19:52:09	7439-96-5	Manganese	37.4	ug/L	1.0	12/14/2015	12/22/2015	12/16/2015	50	50	MS	FD-04	
45671	MF6R32	MF6R47	5120223-06	W	Field_Sample	12/30/2015	19:52:09	7440-02-0	Nickel	2.6	ug/L	1.0	12/							

INORGANIC/ORGANIC COMPLETE SDG FILE (CSF) INVENTORY CHECKLIST

Case No.	45671	SDG No.	MF6R32	SDG Nos. To Follow	Mod. Ref. No.	2542.1	Date Rec	01/06/16
EPA Lab ID:			BON			ORIGINALS		
Lab location:			Hattiesburg, MS			YES	NO	N/A
Region:			6 Audit No.: 45671/MF6R32			CUSTODY SEALS		
Resubmitted CSF?		Yes		No X		1. Present on package?	X	
Box No(s):		1				2. Intact upon receipt?	X	
COMMENTS: 14/15 Sample tags were not required for this case.								
FORM DC-2								
3. Numbering scheme accurate? X 4. Are enclosed documents listed? X 5. Are listed documents enclosed? X								
FORM DC-I								
6. Present? X 7. Complete? X 8. Accurate? X								
TRAFFIC REPORT/CHAIN-OF-CUSTODY RECORD(s)								
9. Signed? X 10. Dated? X								
AIRBILLS/AIRBILL STICKER								
11. Present? X 12. Signed? X 13. Dated? X								
SAMPLE TAGS								
14. Does DC-I list tags as being included? X 15. Present? X								
OTHER DOCUMENTS								
16. Complete? X 17. Legible? X 18. Original? X								
18a. If "NO", does the copy indicate where original documents are located? X								

Over for additional comments.

Audited
by:



Sonya Meekins/ESAT Data Reviewer

Date 01/15/16

Audited
by:

Date

Signature

Printed Name/Title

DC-2

USEPA CLP COC (LAB COPY)

DateShipped: 12/15/2015

CarrierName: FedEx

AirbillNo: 859483220215

CHAIN OF CUSTODY RECORD

Case #: 45671

Cooler #:

EPW14029

MF6R32

No: 6-121515-111029-0018

Lab: Bonner Analytical Testing Company - BON

Lab Contact: Chris Bonner

Lab Phone: 601-264-2854

Sample(s) to be used for Lab QC: 277-0030 Tag 1218, 277-0030 Tag 1219, 277-0030 Tag 1221, 277-0030 Tag 1222 - Special
 Instructions: ICP-MS for: Aluminum, Calcium, Iron, Magnesium, Potassium, Sodium, Antimony, Arsenic, Barium, Beryllium,
 Cadmium, Chromium, Cobalt, Copper, Lead, Manganese, Nickel, Selenium, Silver, Thallium, Vanadium, Zinc
 Analysis Key: DMw+DHo=DiscMetals ICP-MS by ISM02.3/MA#2542.1 & Dissolved Hg by ISM02.3, TMw+Hg+Cn=TotalMetals ICP-MS by ISM02.3/MA#2542.1 & Hg/Cn by ISM02.3

Analysis Key: DMw+DHg=DissMetals ICP-MS by ISM02.3/MA#2542.1 & Dissolved Hg by ISM02.3. TMw+Hg+Cn=TotalMetals ICP-MS by ISM02.3/MA#2542.1 & Hg,Cn by ISM02.3

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
No/Analysis	John Lm/SERAS	12/15/15 12:50	J. Aik Boe	12-16-15 0943	good
					COPY
					ORIGINAL IN CSF MELR39

ORIGINAL IN CSP: MFLRZ9

Signature: P. A. K.

ADDENDUM

Data Validation Report

Page 1

Data Review Results

Mon, 11 Jan 2016 11:52:40

Lab Code: BON

SDG: MF6R32

Contract: EPW14029

Submission Group Id: 30116601

Lab Name: Bonner Analytical Testing Co.

Case: 45671

Client: EPA Region 6

SOW: ISM02.3

HoldingTimes_Preservation

NONE FOUND

Data Validation Report

Page 2

Data Review Results

Mon, 11 Jan 2016 11:52:40

Lab Code: BON	SDG: MF6R32	Contract: EPW14029	Submission Group Id: 30116601
Lab Name: Bonner Analytical Testing Co.	Case: 45671	Client: EPA Region 6	SOW: ISM02.3

TUNE

NONE FOUND

Data Validation Report

Page 3

Data Review Results

Mon, 11 Jan 2016 11:52:40

Lab Code: BON	SDG: MF6R32	Contract: EPW14029	Submission Group Id: 30116601
Lab Name: Bonner Analytical Testing Co.	Case: 45671	Client: EPA Region 6	SOW: ISM02.3

InitialCalibration

NONE FOUND

Data Validation Report

Page 4

Data Review Results

Mon, 11 Jan 2016 11:52:40

Lab Code: BON

SDG: MF6R32

Contract: EPW14029

Submission Group Id: 30116601

Lab Name: Bonner Analytical Testing Co.

Case: 45671

Client: EPA Region 6

SOW: ISM02.3

Continuing Calibration Verification

NONE FOUND

Data Validation Report

Page 5

Data Review Results

Mon, 11 Jan 2016 11:52:40

Lab Code: BON

SDG: MF6R32

Contract: EPW14029

Submission Group Id: 30116601

Lab Name: Bonner Analytical Testing Co.

Case: 45671

Client: EPA Region 6

SOW: ISM02.3

Blanks

Method - Metals by ICP-MS

Test Name: EXES-1342

Defect Message: The following samples have analyte results less than or equal to CRQLs. The associated CCB analyte results are less than or equal to CRQLs. Detects are qualified as U. Sample results are reported at CRQLs.

Associated Samples: MF6R32, MF6R42, MF6R44, MF6R45, MF6R46, MF6R47

Antimony	MF6R46, MF6R42, MF6R45, MF6R47
Cobalt	MF6R46
Copper	MF6R45
Silver	MF6R42, MF6R44, MF6R32
Thallium	MF6R44, MF6R32

Test Name: EXES-476

Defect Message: The following samples have analyte results less than or equal to CRQLs. The associated ICB analyte results are less than or equal to CRQLs. Detects are qualified as U. Sample results are reported at CRQLs.

Associated Samples: MF6R32, MF6R42, MF6R44, MF6R45, MF6R46, MF6R47

Antimony	MF6R46, MF6R47, MF6R45, MF6R42
Silver	MF6R32, MF6R44, MF6R42
Thallium	MF6R44, MF6R32

Test Name: EXES-478

Defect Message: The following samples have analyte results greater than CRQLs. The associated ICB analyte results are less than or equal to CRQLs. Use Professional Judgement to qualify detects.

Associated Samples: MF6R32, MF6R42, MF6R44, MF6R45, MF6R46, MF6R47

Aluminum	MF6R47, MF6R46, MF6R32, MF6R44, MF6R42
Antimony	MF6R44, MF6R32
Arsenic	MF6R42, MF6R32, MF6R45, MF6R46, MF6R47, MF6R44
Barium	MF6R44, MF6R32, MF6R45, MF6R42, MF6R46, MF6R47
Beryllium	MF6R32
Calcium	MF6R42, MF6R32, MF6R47, MF6R44, MF6R45, MF6R46
Chromium	MF6R44, MF6R32

Data Validation Report

Page 6

Data Review Results

Mon, 11 Jan 2016 11:52:40

Lab Code: BON

SDG: MF6R32

Contract: EPW14029

Submission Group Id: 30116601

Lab Name: Bonner Analytical Testing Co.

Case: 45671

Client: EPA Region 6

SOW: ISM02.3

Test Name: EXES-478**Defect Message:** The following samples have analyte results greater than CRQLs. The associated ICB analyte results are less than or equal to CRQLs. Use Professional Judgement to qualify detects.**Associated Samples: MF6R32, MF6R42, MF6R44, MF6R45, MF6R46, MF6R47**

Cobalt	MF6R32, MF6R44, MF6R42, MF6R45, MF6R47
Copper	MF6R46, MF6R32, MF6R42, MF6R44, MF6R47
Iron	MF6R46, MF6R42, MF6R32, MF6R47, MF6R44, MF6R45
Lead	MF6R47, MF6R46, MF6R44, MF6R42, MF6R32
Magnesium	MF6R32, MF6R44, MF6R45, MF6R46, MF6R42, MF6R47
Manganese	MF6R42, MF6R32, MF6R45, MF6R46, MF6R47, MF6R44
Nickel	MF6R42, MF6R46, MF6R47, MF6R32, MF6R44
Potassium	MF6R44, MF6R47, MF6R42, MF6R45, MF6R46, MF6R32
Selenium	MF6R32
Sodium	MF6R42, MF6R44, MF6R32, MF6R45, MF6R47, MF6R46
Vanadium	MF6R44, MF6R32
Zinc	MF6R32, MF6R46, MF6R44, MF6R42, MF6R47

Test Name: EXES-479**Defect Message:** The following samples have analyte results greater than CRQLs. The associated CCB analyte results are less than or equal to CRQLs. Use Professional Judgement to qualify detects.**Associated Samples: MF6R32, MF6R42, MF6R44, MF6R45, MF6R46, MF6R47**

Aluminum	MF6R47, MF6R32, MF6R46, MF6R44, MF6R42
Antimony	MF6R32, MF6R44
Arsenic	MF6R32, MF6R47, MF6R42, MF6R45, MF6R46, MF6R44
Barium	MF6R44, MF6R32, MF6R45, MF6R42, MF6R46, MF6R47
Beryllium	MF6R32
Calcium	MF6R45, MF6R47, MF6R44, MF6R32, MF6R46, MF6R42
Chromium	MF6R44, MF6R32
Cobalt	MF6R47, MF6R42, MF6R32, MF6R45, MF6R44
Copper	MF6R47, MF6R46, MF6R32, MF6R44, MF6R42
Iron	MF6R46, MF6R42, MF6R32, MF6R47, MF6R45, MF6R44
Lead	MF6R46, MF6R32, MF6R47, MF6R42, MF6R44
Magnesium	MF6R32, MF6R44, MF6R45, MF6R42, MF6R47, MF6R46
Manganese	MF6R47, MF6R46, MF6R42, MF6R32, MF6R44, MF6R45
Nickel	MF6R44, MF6R42, MF6R46, MF6R47, MF6R32
Potassium	MF6R42, MF6R45, MF6R47, MF6R44, MF6R32, MF6R46
Selenium	MF6R32
Sodium	MF6R32, MF6R42, MF6R45, MF6R47, MF6R44, MF6R46
Vanadium	MF6R32, MF6R44
Zinc	MF6R42, MF6R44, MF6R46, MF6R32, MF6R47

Data Validation Report

Page 7

Data Review Results

Mon, 11 Jan 2016 11:52:40

Lab Code: BON

SDG: MF6R32

Contract: EPW14029

Submission Group Id: 30116601

Lab Name: Bonner Analytical Testing Co.

Case: 45671

Client: EPA Region 6

SOW: ISM02.3

Test Name: EXES-508

Defect Message: The following samples have analyte results greater than CRQLs. The associated PB analyte results are less than or equal to CRQLs. Use Professional Judgement to qualify detects.

Associated Samples: MF6R32, MF6R42, MF6R44, MF6R45, MF6R46, MF6R47

Antimony	MF6R32, MF6R44
Arsenic	MF6R42, MF6R45, MF6R44, MF6R46, MF6R47, MF6R32
Barium	MF6R44, MF6R32, MF6R45, MF6R47, MF6R42, MF6R46
Chromium	MF6R32, MF6R44
Copper	MF6R47, MF6R42, MF6R46, MF6R32, MF6R44
Iron	MF6R44, MF6R45, MF6R47, MF6R46, MF6R42, MF6R32
Lead	MF6R42, MF6R32, MF6R44, MF6R46, MF6R47
Nickel	MF6R46, MF6R47, MF6R44, MF6R32, MF6R42
Potassium	MF6R47, MF6R42, MF6R45, MF6R46, MF6R44, MF6R32
Sodium	MF6R32, MF6R47, MF6R46, MF6R42, MF6R44, MF6R45

Method - Mercury by Cold Vapor**Test Name: EXES-480**

Defect Message: The following samples are associated with CCB that has analyte results less than or equal to (-MDLs) but greater than or equal to (-CRQLs). Use Professional Judgement to qualify detects and nondetects.

Associated Samples: MF6R32, MF6R42, MF6R44, MF6R45, MF6R46, MF6R47

Mercury	MF6R45, MF6R42, MF6R32, MF6R46, MF6R47, MF6R44
---------	--

Test Name: EXES-549

Defect Message: The following samples are associated with PB that has analyte results less than or equal to (-MDL) but greater than or equal to (-CRQL). Use Professional Judgement to qualify detects and nondetects.

Associated Samples: MF6R32, MF6R42, MF6R44, MF6R45, MF6R46, MF6R47

Mercury	MF6R45, MF6R42, MF6R32, MF6R46, MF6R47, MF6R44
---------	--

Data Validation Report

Page 8

Data Review Results

Mon, 11 Jan 2016 11:52:40

Lab Code: BON

SDG: MF6R32

Contract: EPW14029

Submission Group Id: 30116601

Lab Name: Bonner Analytical Testing Co.

Case: 45671

Client: EPA Region 6

SOW: ISM02.3

InterferenceCheckSample

NONE FOUND

Data Validation Report

Data Review Results

Page 9

Mon, 11 Jan 2016 11:52:40

Lab Code: BON

SDG: MF6R32

Contract: EPW14029

Submission Group Id: 30116601

Lab Name: Bonner Analytical Testing Co.

Case: 45671

Client: EPA Region 6

SOW: ISM02.3

LaboratoryControlSample

NONE FOUND

Data Validation Report

Data Review Results

Page 10

Mon, 11 Jan 2016 11:52:40

Lab Code: BON

SDG: MF6R32

Contract: EPW14029

Submission Group Id: 30116601

Lab Name: Bonner Analytical Testing Co.

Case: 45671

Client: EPA Region 6

SOW: ISM023

MatrixSpikes

NONE FOUND

Data Validation Report

Page 11

Data Review Results

Mon, 11 Jan 2016 11:52:40

Lab Code: BON

SDG: MF6R32

Contract: EPW14029

Submission Group Id: 30116601

Lab Name: Bonner Analytical Testing Co.

Case: 45671

Client: EPA Region 6

SOW: ISM02.3

SerialDilution

Method - Metals by ICP-MS

Test Name: EXES-1334

Defect Message: The following samples are associated to the Serial Dilution sample with analyte absolute value %D >10% and the original sample result is > 50xMDL.

Detected are qualified as estimated J. Non-detects are qualified estimated UJ.

Associated Samples: MF6R32, MF6R42, MF6R44, MF6R45, MF6R46, MF6R47

Aluminum	MF6R42L
Sodium	MF6R42L

Data Validation Report

Page 12

Data Review Results

Mon, 11 Jan 2016 11:52:40

Lab Code: BON

SDG: MF6R32

Contract: EPW14029

Submission Group Id: 30116601

Lab Name: Bonner Analytical Testing Co.

Case: 45671

Client: EPA Region 6

SOW: ISM02.3

Internal Standard

NONE FOUND

Data Validation Report

Page 13

Data Review Results

Mon, 11 Jan 2016 11:52:40

Lab Code: BON

SDG: MF6R32

Contract: EPW14029

Submission Group Id: 30116601

Lab Name: Bonner Analytical Testing Co.

Case: 45671

Client: EPA Region 6

SOW: ISM02.3

Detection Limit

Method - Metals by ICP-MS

Test Name: EXES-790

Defect Message: The following samples have analyte results greater than or equal to detection limit (MDL) and below quantitation limit (CRQL). Detects are qualified as estimated J.

Associated Samples: MF6R32, MF6R42, MF6R42L, MF6R44, MF6R45, MF6R46, MF6R47, PBW01

Aluminum	MF6R42L
Antimony	MF6R46, PBW01, MF6R47, MF6R42, MF6R42D, MF6R45
Arsenic	PBW01, MF6R42L
Barium	MF6R42L, PBW01
Beryllium	MF6R44
Cadmium	MF6R46, MF6R42D, MF6R42, MF6R32, MF6R47, MF6R44
Chromium	MF6R46, MF6R47, MF6R45, MF6R42, MF6R42D, PBW01
Cobalt	MF6R46
Copper	MF6R45, MF6R42L, PBW01
Iron	PBW01
Lead	PBW01, MF6R45
Nickel	MF6R45, MF6R42L, PBW01
Potassium	PBW01
Selenium	MF6R44, MF6R42L
Silver	MF6R44, MF6R42D, MF6R42, MF6R32
Sodium	PBW01
Thallium	MF6R42D, MF6R32, MF6R44, PBW01
Vanadium	MF6R47, MF6R42D, MF6R42, MF6R46
Zinc	MF6R45

Method - Mercury by Cold Vapor

Data Validation Report

Page 14

Data Review Results

Mon, 11 Jan 2016 11:52:40

Lab Code: BON	SDG: MF6R32	Contract: EPW14029	Submission Group Id: 30116601
Lab Name: Bonner Analytical Testing Co.	Case: 45671	Client: EPA Region 6	SOW: ISM02.3

Test Name: EXES-790

Defect Message: The following samples have analyte results greater than or equal to detection limit (MDL) and below quantitation limit (CRQL). Detects are qualified as estimated J.

Associated Samples: MF6R32

Mercury	MF6R32
---------	--------

Data Validation Report

Page 15

Data Review Results

Mon, 11 Jan 2016 11:52:40

Lab Code: BON

SDG: MF6R32

Contract: EPW14029

Submission Group Id: 30116601

Lab Name: Bonner Analytical Testing Co.

Case: 45671

Client: EPA Region 6

SOW: ISM02.3

Duplicates

NONE FOUND

Data Validation Report

Page 16

Data Review Results

Mon, 11 Jan 2016 11:52:40

Lab Code: BON

SDG: MF6R32

Contract: EPW14029

Submission Group Id: 30116601

Lab Name: Bonner Analytical Testing Co.

Case: 45671

Client: EPA Region 6

SOW: ISM02.3

Sample Analysis

NONE FOUND